THE

CHICAGO MEDICAL JOURNAL.

Vol. XXV.—APRIL 15, 1868.—No. 8.

EXPERIMENTAL MEDICINE.

Experimental Researches into the Subject of the Action of Phosphorus upon Living Tissues.— Reflections upon the Pathogenesis of Fatty Transformations. By Dr. L. Ranvier, Paris.

TRANSLATED EXPRESSLY FOR THE JOURNAL, BY WALTER HAY, M.D., CHICAGO.

Fatty transformations are so common, and are surrounded by so great obscurity in their pathogenesis, that the means for producing them experimentally become necessarily very interesting. Since it became known that *Phosphorus*, introduced into the economy, determined, in the liver, the kidneys, the muscles, etc., fatty transformations, complete and very rapid, numerous investigations have been undertaken upon poisoning by this substance.

Since the memoir which we published in 1863,* in which is published a complete history of the question up to this epoch, new observations have been published. Several have chosen this subject for their inaugural theses; certain professors have

* Fritz, Ranvier et Verliac. De la Stéatose dans L'Empoisonnement par le Phosphore. Arch. Gen. de Méd., 1863.

treated it in their instructions; * but no new opinion has been advanced in France touching the pathogenesis of these fatty transformations.

The same can not be said of Germany, where several (three) authors have occupied themselves with the mode of action of *Phosphorus* upon the tissues, in producing in them fatty transformations. Only, in place of seeking to clear up, by means of experiment, the obscurity which rests upon the subject of fatty transformations in general, they have made experiments, with a preconceived theory, upon the pathogenesis of fatty transformations. This theory originated in Berlin. Indeed, after having studied the inflammatory lesions of some organs (the liver, kidneys, and muscles,) Virchow classifies these lesions, according as they involve the connective stroma of these organs, or their special histological elements.

In the first case, the predominant phenomenon is a multiplication of the cellular elements of the connective tissue of the stroma; and the inflammation characterized by this phenomenon receives the name of *Interstitial.*

In the second case, the special histological elements, hepatic cells, epithelium of tubuli uriniferi, and striated fasciculi, after having presented some characteristics of proliferation, and having been infiltrated with an albuminoid substance, undergo fatty transformations. The inflammation manifesting itself essentially by this phenomenon, has been designated under the name of parenchymatous; and the fatty transformation

* Lancereaux, Etude sur la Déginérescence Graissense des Elements Actifs du Foie, des Reins, et des Muscles de la vie Animale dans L'Empoisonnement par le Phosphore, Union Méd., 1863.

L. Branet. De L'Empoisonnement Aiga par le Phosphore, th., 1863.

E. Fabre. De la Dégénérescence Graissense dans L'Empoisonnement Aiga par le Phosphore, th., 1864.

Cornil et Bergeron. Altération Granulo-Graissense de L'Epithélium des Glandes de L'Estomæ dans un Cas de L'Empoissonnement par le Phosphore. (Soc. de Biol., 1865.)

Tardein. Leçons sur L'Empoisonnement par le Phosphore. (Gaz. des Hôp., 1864.)

Blachez, la Stéatose, th. agr., 1866.

becomes the most important sign of this sort of inflammation. If it has not always been taught in the school, that the fatty transformation of the muscles and of the tubuli uriniferi, for example, manifests always inflammation, at least one is induced to suppose an inflammatory origin to these alterations, in the absence of every other cause.

Moreover, a pupil of this school, Dr. Mannkopff,* maintains that in poisoning by *Phosphorus*, the fatty transformations depend upon an inflammation determined by the irritant action of the toxic matter. He relied especially upon the examination of the liver and kidneys, which, according to his observations, should present, at the same time with the steatosis, hypertrophy of their stroma.

Since I became acquainted with the opinion of this author, I have examined, with the greatest care, subjects poisoned by *Phosphorus*, and animals which I have subjected to intoxication by this substance, to determine whether the stroma of the kidney and of the liver presented any hyperplastic thickening; and I must say that my researches into this subject have always met with negative results. I believe that some error has crept into the observations of Dr. Mannkopff: close attention is necessary, and also excellent lenses, in order to appreciate slight hyperplasias of conjunctive tissues which occupy the spaces left between the canaliculi uriniferi and the hepatic cells; for these spaces are traversed by vessels whose nuclei and sanguineous globules can, after hardening in chromic acid, deceive by their size, insufficient for corpuscles of connective tissue.

Virchow † himself maintains the inflammatory nature of

* Mannkopff, Beitrag zur Lehre von der Phosphore Vergiftung. (Wein Méd. Wochenseh, 1863.)
Barjau. Wiener Zeitschr. der Aerzto., 1863.

† Tiingel. Arch. de Virchow, 1864.
Virchow. *Id.*, 1864.
Ludwig Meyer. *Id.*, 1865.
Klebs. *Id.*, 1865.
Pastau. *Id.*, 1865.
Vohl. Berl. Klin. Wocheusch, 1865.

fatty transformations, determined by *Phosphorus;* for, having discovered in the stomachs of subjects dead from poisoning, a fatty transformation of the pepsine glands, he considered it the result of the irritant action of *Phosphorus*, and designated it gastro-adenitis. This mode of opinion has been sanctioned in Germany; and in a recent work, Dr. Hugo Senftleben * admits it without any discussion. It is, however, very open to discussion.

First, then, it is known that *Phosphorus* ingested does not always determine inflammatory lesions of the gastro-intestinal mucous membrane; for, in a number of autopsies, there has not been found, in the stomach or in the intestines, the least inflammatory lesion. In some cases, however, hyperæmias, and even ulcerations, have been observed. I have myself met with ulcerations of the gastric mucous membrane, in a dog to which I had administered *Phosphorus* in solution in *Sulphuric ether.*

In order to produce hyperæmia of the gastric mucous membrane, it is not necessary to administer *Phosphorus* by the digestive canal; for Dr. Senftleben states that he has observed congestion of the duodenum and stomach, in animals that had died in consequence of injections of *Phosphoretted oil* into the cellular tissue. In these cases, the stomach and intestine contain an unctuous substance of a grayish color, formed of epithelial cells, filled with fatty granulations.

That similar lesions exist in the digestive canal, does not follow solely as a direct result of the action of *Phosphorus;* for these lesions could very well depend upon the corrosive action of the gastric juice upon the mucous membrane, denuded of its epithelium. Indeed, does not the fatty degeneration of some of the glands of the stomach and of the epithelial investment of the gastro-intestinal mucous membrane, leave the denuded surface without defence against the irritant action of the gastric and intestinal juices? It is well known that embolias of the capillaries of the digestive mucus membrane, and pemphigus of this surface, give origin to ulcerations of rapid

* Hugo Senftleben. Arch. de Virchow, 1866.

progress, explained by the presence of the gastric juice. I have met, in the case of an old man, with a fatty transformation of a portion of the digestive mucous surface, which had occasioned ulcerations accompanied by hæmatemesis.* It is clear that in these different cases, the epithelial investment no longer exists; the mucous chorion, being no longer protected, has been attacked by the gastric juice.

Moreover, do not the experiments of Senftleben combat the idea of gastritis by the irritant action of *Phosphorus*, since, in these experiments, the toxic element has not been placed in contact with the gastro-intestinal mucous membrane? It seems logical, then, to admit that the fatty *débris* found in the digestive canal, consists of degenerated and desquamated epithelium; and that the redness of the mucous membrane results from the irritant action of the juices upon the denuded surface.

In some case, moreover, it has been determined that the mucous surface has presented neither redness nor ulceration; although the glands had undergone fatty transformation. It might be that in these cases the alteration was in its incipiency, or that all the glands, having undergone degeneration at the same time, could not any longer secrete the corrosive juice. This is, however, merely an hypothesis which may be hereafter verified or falsified by facts.

I come now to the experimental portion of this work.

In order to form an opinion touching the irritant action of *Phosphorus* upon living tissues, it suffices to place some fragments of this substance under the skin and between the muscles of different animals, and to observe whether they determine there the phenomena of inflammation. My experiments have been made upon the frog, the guinea-pig, and the rabbit. I have proceeded in the following manner: I cut from a stick of *Phosphorus*, a small, regular cube, taking care that there remained upon its surface no portion of the coating of white dust, which always covers *Phosphorus* preserved in water, exposed to the light. I measured this little cube, thus

* Bull. de la Soc. Anato., 1863.

obtained, and slipped it through a sub-cutaneous incision into the locality where I desired it to remain.

FIRST SERIES OF EXPERIMENTS.

On the 13th of September, I took three frogs, equally large and vigorous. I cut from a stick of *Phosphorus*, three cubes, having sides of one millimetre in length. These fragments were placed, one between the posterior muscles of the leg of one of the frogs, another under the skin of the loins of another frog, and the last was pushed into the œsophagus of the third frog. These animals were placed in different vessels, and placed in a cool situation. Other healthy frogs were preserved under similar conditions.

During the following days, up to the 30th of September, these different animals presented nothing worthy of note.

Experiment 1. — The first of October, I watched the death-struggle of the first frog. The animal was in a state of muscular relaxation, interrupted, from time to time, by certain slight convulsive movements. Death supervened an hour after the beginning of my observation.

The fragment of *Phosphorus* remained in the position where I had placed it. It had preserved its transparency; its angles remained sharp. I could not establish any very perceptible diminution in its dimensions; from which it is necessary to conclude that the quantity of matter absorbed had been very small. The muscles of the leg in the midst of which the *Phosphorus* was found, presented no swelling or redness. Under the microscope, the nuclei were not augmented in number; and their primitive fasciculi were spangled with fine fatty granulations, occupying the depressions left between the elementary fibrillæ.

The presence of fatty granulations in the muscular fasciculi in the neighborhood of the piece of *Phosphorus*, could have been attributed to a toxic action, either local or general. To determine this, I examined the other muscles of the same animal, and found in them fatty granulations, in number just as considerable.

The fatty transformation of the muscles, then, could not, therefore, be attributed to the local action of the *Phosphorus*. In order to judge the second part of the question, I examined the muscles of a healthy frog; and I observed that all the muscular fasciculi of this frog contained fatty granulations. I continued this investigation in all the frogs which I could procure at that time, and I observed that all of them had granulo-fatty muscles.

When, therefore, any one may make, in the autumn, experiments upon frogs, having for their object the determination amongst them of fatty transformations, it is necessary to be acquainted with this physiological condition of the muscles. Recently, there has appeared in the "Journal" of M. Schulze, a work, apparently detailed by A. Stuart, upon the fatty transformations of muscles supervening upon the application of irritating substances. Almost all the experiments of this author have been conducted upon the frog; and, moreover, he seemed to be ignorant that in autumn these animals have their muscles loaded with fatty granulations.

The liver, the kidneys and the heart of the frog which we examined at that time, presented, to the naked eye and to the microscope, the characteristics of complete fatty degeneration. The liver was of a yellow color, its volume was nearly doubled, its edges softened; its cells not destroyed at any point, but loaded with little drops, and with fine fatty granulations. The kidneys were furrowed with yellowish stripes, and the epithelial cells of their tubeli were infiltrated with fat.

Experiment 2. — The second frog died on the 8th of October, twenty-five days after the introduction of *Phosphorus* under the skin of the lumbar region. I discovered the fragment in the position where I had placed it. It had undergone no apparent alteration, nor had it determined any inflammation in its neighborhood; not the least adhesion, no redness, no serosity. The muscles presented the same characteristics as those of the preceding frog. The viscera were in a state of advanced fatty degeneration.

Experiment 3. — The third frog died the next day, the 9th

of October, twenty-six days after the introduction of the *Phosphorus* into the digestive canal. I did not discover the fragment, either in the stomach or in the intestine. It was probably rejected. I did not determine any alteration of the gastro-intestinal mucous membrane. The muscles were granulo-fatty; the kidneys and liver were completely degenerated.

(*To be continued.*)

A CASE OF SHOULDER PRESENTATION.

BY B. F. ROSS, M.D., SOUTH PASS, ILL.

[Noticing in the JOURNAL of the 1st inst., the "Report of a Case of Instrumental Delivery" in a case of Shoulder Presentation, in which the writer asks some "sage practitioner" to suggest a better method than amputation, I concluded to forward the notes of a somewhat similar case to you,—not claiming to be a sage amongst the members of the profession, however,—for your consideration and disposal.]

Mrs. H., aged 34, of a moderately strong constitution, and who had given birth to six children—the third child presenting the shoulder, and the physician in attendance amputated the arm at the shoulder—was again seized with labor pains about one o'clock A.M., April 2nd, 1865. There being no physician within five miles of her residence, a midwife was called in at three o'clock A.M.; the liquor amnii having been discharged about one hour before her arrival. Thinking that all things were doing well, she did not make an examination until the lapse or two or three hours, when, to her great astonishment, she found the hand protruding from the mouth of the womb. Not knowing what to do in this dilemma, she concluded to wait, hoping—as she expressed it—that something would turn up. The fates not favoring her, however, she concluded, at five P.M., to call for a physician. I was accordingly called at six o'clock. On making an examination,

I found the right shoulder presenting, with the head towards the right acetabulum, the right arm in the vagina close to the os externum, and grasped by the os uteri as firmly as though it had been placed in a vice, very much swollen and discolored. After repeated attempts to introduce my hand, I concluded that it was impossible to turn it without first placing the patient under the influence of chloroform, which I did not have, nor could get short of Jonesboro, some ten miles distant. On stating my opinions and conclusions to the friends, they insisted I should amputate, as Dr. P. had done in the previous case. This I could not consent to do. Owing to circumstances over which I had no control, I did not get the chloroform until the middle of the next day. I in the meantime had called to my assistance Dr. Dodds, of Anna, who administered the chloroform; and when perfectly under its influence, I again introduced my right hand, and finding it impossible to get my hand above the elbow of the child's arm without using more force than I thought prudent, I grasped the arm at the elbow as firmly as I could, and pushing steadily and firmly upwards and a little to the left, I soon had the satisfaction of feeling the arm ascend gradually into the womb, which I found perfectly relaxed. As soon as I found my hand in the cavity of the womb, I loosed my hold on the arm, and gliding my hand along the breast and abdomen of the child until I came in contact with the right leg, which I grasped by the knee, and completed the version by bringing down the foot, without waiting to hunt for the left foot. As soon as the patient had recovered from the influence of the anæsthetic, I gave her *Pulv. ergotæ*, ʒ ii, and in the course of fifteen or twenty minutes the womb had commenced to contract forcibly, and the child was delivered in about one hour. It may be urged that, inasmuch as I did not save the life of the child, I might as well have amputated the arm; but to this objection I would answer, that if I had been able to get the chloroform as soon as I could have reasonably expected, I think the result, so far as the child was concerned, would have been different. The mother made as good a recovery as could have been expected.

REPLY TO A CASE OF INSTRUMENTAL DELIVERY

Reported by W. Anderson, M.D., Leroy, Ill.

BY E. K. TRAVERS, M.D., AMBOY, ILL.

In the March number of the JOURNAL, there is a case reported by W. Anderson, M.D., of Leroy, Ill., where he was called in consultation with a Dr. D., to a lady in labor, with a shoulder presentation, the head in the left acetabulum, the left arm protruding from the vagina, and very much swollen, so that the insertion of the hand into the uterus was impossible, while the force of the uterus was so great as to prevent an adjustment of the fœtus by bringing the head into the pelvis. The arm, he says, could not be replaced; and he decided, with Dr. D., an amputation unavoidable, which he performed at the shoulder. He also says that he knew the infant was dead before the operation; which, however, did not influence his action.

Now, not having any claim to be a sage practitioner, I suppose I ought to remain dumb; but having had the experience of several such cases, during the last few years, I dare to reply. In the first place, my practice is to put my patient completely under the influence of *Chloroform*, thus quieting the force of the uterus, which allows me to slip my hand up by degrees, persistently resisting all forces, and never withdrawing my hand until after I take hold of the child's feet, and draw them gradually into the world; while the other hand is on the abdominal parieties of my patient, assisting to turn the child. Now, I think there is no necessity whatever to mutilate the child, in such a presentation. I don't consider the arm at all in the way, in turning the child and delivering by the feet; but I do think it useless to try to bring the head into the pelvis, or replace the arm, as I think it can not be done in such cases. My motto is, not to waste precious time in useless endeavors.

The following is the last case of the kind I had: Aug. 25th,

1867, I was called, about 6 P.M., to attend Mrs. T. F., in her third confinement. Labor had already progressed for twelve hours. The membranes had ruptured at 5 A.M., previous to my arrival; and the amniotic fluid escaped. The head of the child was in the right iliac fossa, with the left arm and shoulder presenting, the back of the child directed towards the abdomen of the mother. The arm was very much swollen, and presenting in the vulva. To complicate the case more than this one Dr. Anderson quotes, this woman had a very narrow and contracted pelvis; her first child, which was still-born, had to be taken from her with forceps, after a long and protracted labor of eighteen hours. The cranium was very much compressed, and elongated in coming through the pelvis; but I desisted from using the forceps. Taking these facts into consideration, I made up my mind that I had a very difficult case; and I sent for my friend, Dr. Felker, to whom I am very much indebted for his efficient aid in turning and delivering the child, after first putting her completely under the influence of *Chloroform*. Before the anæsthetic was given, it was impossible to introduce the hand, from the contracted state of the womb. I quote this case, from its similarity to that of Dr. Anderson's.

In connection with this subject, I would add that there is too much and too early an interference with natural labors, with too great a desire to turn them into instrumental ones; and when I think how many innocents are ruthlessly destroyed by either inconsiderate or incomplete accouchers, I shudder. A couple of weeks ago, in this locality, there was a lady in labor for about twelve hours, with a very natural presentation. The labor had progressed until the occiput was presenting at the vulva, with the head pressing on the perineum; when the young man in attendance, without consultation, performed the operation of craniotomy — and then boasted of a great operation! But if this was the only case of the kind, it would be well; but I know of several just such cases. I am sometimes inclined to think that men are induced to commit such uncalled-for operations, for the purpose of gaining a reputation for talents that they do not possess.

FOREIGN CORRESPONDENCE.

PARIS, *February 7th*, 1868.

Chicago Medical Journal:

Many years ago, M. Gillermond published a process for obtaining *Morphine*, then recently discovered, from an alcoholic solution of *Opium*, by means of *Ammonia*. It being rather a costly process, it was not adopted; but in 1849, the son of the discoverer, Dr. Gillermond, of Lyons, showed that it possessed some advantages in the testing of the quantity of *Opium*. Some difficulties in the preparation have now induced the same practitioner to publish an explanatory note on this subject. The process is as follows: Dissolve 15 grammes of *Opium*, by degrees, in 100 grammes of *Alcohol*, and strain the tinctures successively through a cloth into a wide-necked phial, containing 4 grammes of *Ammonia*. After the lapse of twelve hours, the *Morphine* will be found eliminated with a certain quantity of *Narcotine*; the former having coated the glass with colored crystals, large enough to be gravelly to the touch, while the *Narcotine* has crystallized in small white needles, having the appearance of mother-of-pearl. The whole of the crystals are collected on a piece of linen, and well washed with water, in order to deprive them of the *Meconate of ammonia* they may happen to contain. The crystals are taken up again, and thrown into a small receiver full of water. The *Narcotine*, which is lighter than the fluid, will float at the top; the *Morphine*, which is heavier, will fall to the bottom; and the former substance may be separated from the latter by decantation. A good sample of *Opium* should yield at least from 1 gramme 25 centigrammes, to 1 gramme 50 centigrammes of crystallized *Morphine*, for every 15 grammes of *Opium*. The separation of the *Narcotine* from the *Morphine* may not always be complete by this process; but it may

be, if necessary, effected by repeatedly pouring boiling *Ether* on. Dr. Gillermond has improved his process by triturating 15 grammes of *Opium* with 110 grammes of *Alcohol*, at 70-100th's, or 120 cubic centimeters. When the dissolution is complete, which generally takes place in half an hour, the weight of 125 grammes, if diminished, should be made up with *Alcohol;* the solution is then well shaken, filtered into a phial, and a tube, thinned off at one end, being introduced, 2 grammes of *Ammonia* are poured in, so as to reach the bottom without disturbing the liquid. The tube is then quietly removed, and the phial closed; and after standing thirty-six hours, the *Morphine* will be found crystallized at the bottom of the phial.

Were all the cures proposed for hydrophobia, up to this day, collected into a volume, it might equal the largest ever brought to light. But, compared with the vast number of devices put forward for curing the disease when actually caught, suggestions of a preventive nature have been exceedingly few; and this circumstance constitutes the chief merit of an article in the *Tiglo Medical*, a Spanish medical paper. For a long time past, this journal informs us, the peasants of Gallicia have entertained the idea that dogs bitten by vipers, which are very common in that province, are no longer liable to contract hydrophobia, whether spontaneous or inoculated, after recovering from the bite of the reptile. This belief has induced them to endeavor to protect their dogs from the danger of *rabies canina*, by having them bit by vipers when young. If, indeed, the venom of the viper be a preservation against the other virus, the inoculation of the former will, by preventing dogs from contracting hydrophobia, indirectly protect men from being attacked with it. This consideration has induced a Spanish physician, whose name, unfortunately, is not given, to institute experiments with a view to test the efficacy of this preservation, by causing a number of young dogs, five or six months old, to be stung by vipers; and after recovery, to be subjected to the bite of mad dogs. The result was, that in every case the former were found to be insensible to the virus

of hydrophobia, no matter how often or at what period of their lives they were subjected to the ordeal. The sting of the viper would bring on fever, somnolency and uneasiness, increasing for three or four days, and then subsiding in the course of three or four days more. Olive oil, externally and internally administered, would afford some relief. If, five or six months later, the same dog were stung a second time, the only consequence would be a slight tumefaction, without fever; and any subsequent bite by a viper produces no effect whatever. Without venturing to contradict the facts here stated, it is difficult to imagine how they can be reconciled with the process of elimination, which invariably takes place when a poison, introduced into the economy, has not occasioned death. This subject is attracting considerable attention at the Academy of Medicine, and experiments are being instituted to ascertain the value of the remedy proposed.

The *Journal des Connaissances Médicale* notices a book recently published by Dr. Foissac, on the influence of climate and physical agents on man. The author maintains that the human race is cosmopolitan, since it can live every where, and by its intellectual powers neutralize the evil effects of physical agents on its organism. To this, Dr. Caffes demurs, objecting that man does not perpetuate his race under all climates; that he may, it is true, in any climate to which he is taken in the prime of life, but that sterility is often the consequence, and that, at any rate, his offspring will die at an early age. However this may be, Dr. Foissac's book contains much interesting matter; and the chapter on stature comprises a great many new and valuable facts. On this subject, Dr. Latour, in his review of the volume, expresses himself as follows: "No one will maintain that good soldiers are not to be found among small men. During the campaign in Egypt, Moored Bey's vexation would break out whenever he made a few of our brave *voltigeurs* prisoners. 'What!' he would exclaim, 'are these the men that have beaten us? Shall I never be able to vanquish these little fellows?'" Yet, Dr. Foissac maintains, on the strength of highly reliable historical records,

that the inhabitants of ancient Gaul, who were victors and conquerors by turns, but always terrible on the field of battle, were tall and fine men—contrary to Dr. Broca's opinion. To the low or middling stature of Alexander, Napoleon, and Gustavus Adolphus, he opposes the gigantic proportions of Philopœmus, Pyrrhus, Cæsar, Charlemagne, Condé, Peter the Great, and Charles the Twelfth. Most of the generals of the Republic and marshals of the First Empire, such as Championnet, Kleber, Pichegru, Masséna, Soult, Remadotte, Kellerman, Bessiéres, and Ney, were very tall—or, at least, much above the common standard. Dr. Foissac finds the latter condition not only in the case of military men of note, but also in that of great political characters—orators, poets, learned men, and, generally, of most men representing intellectual power; whence he concludes that, save in the case of deformity, genius and talent are independent of physical conformation. Scarron and Pope would seem to nullify even the above restricted clause.

The death is announced, at the age of 92, of M. Carlo Speranza, the Nestor of Italian physicians, formerly Dean of the Faculty of Medicine and University of Pavia. M. Speranza was author of several important works, and was, if I mistake not, corresponding member of the Academy of Medicine in this city.

The *Clinique Europiénne* contains the following account of certain experiments made by M.M. Klautoch and Stich, to ascertain the real seat of the sense of taste, which is generally supposed to exist on the whole surface of the tongue, especially the anterior part of that organ, the middle of the dorsum being but feebly endowed with this sense. It seems, from these experiments, that the only portion of the tongue which is sensible to taste, is a narrow space all around. The breadth of this sensitive zone varies in different subjects; in some, it is not more than two lines; in others double that breadth. It rarely extends to the inferior surface. The experiments were as follows: A substance having a strong taste, is first placed on the centre of the tongue, where it produces no effect. It

is then gradually spread out, until the perception of taste is announced; this occurs generally on the border, but in some individuals it begins at the distance of a line from it. The *velum pendulum* of the palate is also sensible to taste; but the pharynx and the tonsils are deprived of the gustatory faculty. This is proved by the fact that if they be touched with stick caustic the patient experiences no taste, provided he keep the tongue and the velum pendulum away from the spot.

The *Abeille Médicale*, in speaking of those soft and elastic dropsical tumors of the skin, called anasarcas, states that *Tannin* has been successfully applied by Dr. Garnier against them. This substance, the astringent principles of galls and other bitter vegetable substances, is administered in solution, in a dose of two grammes per thirty grammes of syrup, diluted with the same quantity of distilled water. Three tablespoonsful per day are given, and the dose gradually increased according to the effect obtained. The *Abeille* quotes three cases in which an almost immediate cure was obtained by this method.

In a paper published by the *Reveue Thérapeutique*, Dr. Ozanam treats of substances capable of destroying the adventitious membrane in croup and malignant quinsy. From his experiments and observations, it appears that the best substances for dissolving the membrane are, first of all, *Ammoniuret of copper*, then *Ammonia*, *Soda*, *Urea*, *Cyanide of potassium*, *Chloride of potassium*, *Glycerine*, *Lime water*, and common *Salt*. *Carbonate* or *Chlorate of potash*, and *Phosphate of soda*, are of but slight efficacy. The dissolving agents of great power are: *Chloride of bromine*, *Bromine* itself, and *Chlorine;* then, secondary to these, *Iodine*, *Perchloride of iron*, *Bichloride of mercury*, and *Chromium*, which harden the adventitious membrane, and detach it in a mass, without severing its elements. Dr. Ozanam is of opinion that seawater, which contains *Bromine* and the elements of the motherley of *Soda*, extracted from *Wrack*, is an excellent remedy in all cases of bad sore-throat; but he prefers *Bromine* to all

others, not only as a powerful dissolvent, but also because it exerts an elective action on the fauces, the velum pendulum, palate, and the larynx. *Bromine* possesses another valuable property: like *Chlorine*, it destroys contagion, besides being more manageable. With its emanations, the air may be purified, the dormitories and whole houses protected from contagion, at an insignificant expense. But as it is a most powerful agent, it can not be used in a pure state. It should not be employed under the forms of a tincture, because new compounds are then formed; nor should it be administered in tea, for it would then fix itself upon the vegetable principle, and lose all action. The way to use it is to make an aqueous solution, in the proportion of a drop of *Bromine* to an ounce of water, to be kept in a dark place, and in a closed phial. This solution must be renewed as soon as it loses its amber hue. It is administered in drops every hour, and taken in spoonsful of sugar and water, so as to give from one to two grammes of the solution in the course of twenty-four hours.

M. Pouchet combats the opinion of some physiologists who are willing to admit that certain animals may survive after being completely frozen. From numerous experiments made on several species of animals, he comes to the conclusion that there always takes place, in the congealed part, besides concontraction of the capillary vessels, an alteration of the blood globules, characterized by the disappearance of the nucleus in the reptiles, and by the appearance of crenelated projections in mammalians. Thus altered, the blood globules can not fulfill their functions, and the life of the animal is all the more in jeopardy, that the number of altered globules flowing in the current of the circulation is large. If a portion of the body of an animal be congealed, and maintained in that state, the animal may live a long while yet, owing to the altered blood being unable to mix with the circulatory current, on account of its having lost its fluidity; but death soon occurs, after the frozen parts are thawed out; the altered globules mixing, in great quantity, with the remaining portion of the sanguineous fluid. In every case of congelation, death is due to the altered

state of the blood, and not to the stupefied condition of the nervous system.

The discussion on tuberclosis is still going on, at the Academy of Medicine. No new facts have been elicited on that subject, although several ingenious and plausible theories have been brought forward. In my next letter, I will give you an outline of the debates held on that obscure though most important subject. N.

A CASE OF ACCIDENTAL HÆMORRHAGE.

BY DE LASKIE MILLER, M.D., PROF. OBSTETRICS, DISEASES OF WOMEN, ETC., RUSH MEDICAL COLLEGE.

Mrs. L., aged 40 years, the mother of six children, the last confinement, January 1, 1866, had aborted twice. Was advanced about seven months in her ninth pregnancy, which had been unattended by any unusual symptoms, when, on January 25th ult., at about 3 o'clock, P.M., she was suddenly attacked with fainting — a sense of distension of the abdomen, great anxiety, but without pain.

I saw her at 5 o'clock, about two hours after the attack; found her in an alarming condition, and presenting the following appearance and symptoms: remarkable pallor of the face; lips apparently bloodless; pulse hardly perceptible at the wrist; surface cold, frequently yawning; abdomen greatly enlarged and tense, with no resonance on percussion; slight hæmorrhagic discharge from the vulva; os uteri dilated sufficiently to admit the extremity of the index finger only, and not dilatable with moderate force.

The conclusion at once reached was, that the symptoms were due to internal hæmorrhage, the result of placental rupture or detachment.

On inquiry learned that no accident had happened which would be likely to cause the separation of the placenta from its attachment with the uterus. The only circumstance to

which the detachment could be attributed was inordinate laughter, at dinner, between one and two o'clock, P.M.

The danger appearing imminent, by my order the foot of the bed was elevated about eight or ten inches. Administered a full dose of the *Fl. Ext. of Ergot.* Applied uniform pressure over the abdomen; introduced the colpeurynter and distended the upper part of the vagina forcibly, to dilate the os uteri, and excite uterine contractions, but dilatation to a slight degree only was effected, and no labor pains were induced. I then withdrew the colpeurynter, and passed a catheter through the membranes. As the liquor amnii flowed away, slight uterine contractions could be detected. The dilatation of the os uteri was accelerated by mechanical force, applied by inserting and separating the fingers, not having a more efficient "dilator" at my command. The os yielded slowly; when it had reached about the size of a crown piece, coagulated blood began to escape in great quantity. Without the means of estimating the quantity accurately, I can only say, it was sufficient to account for the prostration, fainting, etc. With this discharge the abdomen diminished in size rapidly, contractions increased in force slightly, which brought the child within reach of the finger, when the presenting part was found to be the right shoulder. Notwithstanding the great loss of blood and consequent exhaustion of the patient, the os uteri was not sufficiently dilated or dilatable to admit the hand, for the purpose of version and prompt delivery. As delay would surely increase the danger, the blunt hook was passed over the pelvic extremity of the trunk, and sufficient traction made to bring this part down, and the delivery of the fœtus was effected without delay. The placenta followed immediately, and presented evidences of having been separated for some time. *Ergot* was repeated, and a binder firmly applied; stimulants were administered; the head kept low. By careful management the patient recovered slowly but perfectly.

This case presents several points of interest:

1st. The slight cause of the accident, viz.: a fit of laugh-

ter. I give this as the cause, for it could be attributed to no other. The patient was the wife of one of our most wealthy citizens, and not subject to the casualties incident to laborious pursuits.

2nd. The sudden appearance of dangerous symptoms: characteristic of loss of blood.

3rd. The importance of perforating the membranes, in cases like this, where delay increases the danger, and over distension prevents uterine contractions.

4th. The utility of the blunt hook in transverse presentations like this, in effecting version and prompt delivery, when the hand can not be introduced sufficiently to effect the object.

5th. The difficulty in effecting dilatation of the os uteri, so unusual in cases of extreme exhaustion from loss of blood.

OCCLUDED ANUS.

BY H. A. CHASE, M.D., VIROQUA, WISCONSIN.

In September, 1867, I was called to attend Mrs. A., in labor with her first child. After a somewhat protracted labor she was delivered of a male child. Five hours after completion of the labor I called and was informed by the nurse that the child had been vomiting for some time, and there had been no passage of the meconium, but in passing its urine it had passed dark specks per penis. Upon examination I found the anus absent, the raphe or median line extending as far back as the tip of the coccyx. I could detect no pouching of the intestine. Having decided to operate, I passed a straight narrow bladed bistoury in the direction of the rectum, but failed to establish an exit for the retained matter.

The child lived several days passing small quantities of meconium by the penis.

After death, permission having been granted, I made an examination and found the bladder distended with meconium.

The descending portion of the colon, instead of ending in the sigmoid flexure, ended in the bladder, with entire absence of rectum. All the other organs were well formed. The father informed me that when fourteen years of age he had an attack of diarrhœa that run along for several days, and then instead of passing the fæcal matter per anus, for three days he passed it all per penis, and had no stool the usual way during that time. He informed me the matter he passed had the same smell and look as fæces, and was passed in large quantities. At the end of three days he had regular stools every few hours, and his urine became clear.

EDITORIAL.

News Items.

Prof. E. S. Carr has resigned his position in the University of Wisconsin.——It is said a new Medical College is being organized in Detroit, Michigan, to offset, probably, the Ann Arbor *fiasco*.——H. H. Childs, M.D., long connected with Berkshire Medical College, is dead.——The Legislature of Wisconsin, at the instance of Dr. D. C. Davies, of Portage City, has passed a liberal law legalizing dissections. Also, to prohibit quacks from giving testimony in courts on medical matters, and from collecting fees. Other stringent legislation, at our last advices, was contemplated. Dr. D. is an energetic worker, and will make his mark in the State of his choice. ——Rush Medical College appears to have had the largest graduating class at its recent commencement as yet reported. The facilities for medical instruction and observation in this city can scarcely be surpassed, at the present time, in any Atlantic city. When the dog in the manger stops howling, there will be no difficulty in rivaling the proudest cities of the old world. God speed the day, even though it result in a Governor or Congressman.——Our friend, D. C. Warner,

M.D., has established a first class Pharmacy and Dispensing Drug Store, on the corner of Indiana Avenue and Twenty-Third Street. This will be good news to the denizens of that rapidly growing division of Chicago. The Doctor can be relied on "every time," either as physician, druggist or dentist. (This latter is the editorial soliloquy.)

Indiana State Medical Society.

INDIANAPOLIS, March 29, 1868.

Editor Chicago Medical Journal :

Please mention in your April number that the Indiana State Medical Society will meet at Indianapolis, on Tuesday, May 19th, 1868.

Very respectfully,

L. D. WATERMAN,

Sec. Ind. St. Med. Soc.

A Card.

We smell a little brimstone and saltpetre under the following, which comes to us from Nashville :

A CARD.—As Rev. J. B. Lindsley and Doctors C. K. Winston, W. T. Briggs and W. K. Bowling have attempted to divest me, in an illegal manner, of my rights as a Professor in the Medical Department of the University of Nashville, and have made a parade of the matter in the newspapers, I hereby inform the public that I will seek redress in due time, through the courts of justice.

T. R. JENNINGS, M.D.,

Prof. Anat. in Med. Col. Univ. of Nashville.

"In the name of the Prophet—Figs!" we command the peace. This is a vermilion edict.

University of Michigan. The Bribe Accepted.

In secret executive session, on the evening of March 25, important action was taken by the Board of Regents of the University of Michigan. We extract from latest dispatches:

"The legislature, last winter, provided for a State appropriation of about $18,000, conditioned upon the organization of a

homœopathic school in connection with the present medical department. The Board of Regents accepted the terms, and, by resolution, created the Michigan School of Homœopathy, to be located at such place, suitable in the eyes of the Regents, other than Ann Arbor, as shall pledge to the Board of Regents, by June 29 next, the greatest amount for the buildings and endowment of said school. The resolution also appointed Dr. C. J. Hempel, of Grand Rapids, professor of Theory and Practice of Medicine in said school, and provided for the appointment of another professor before the commencement of the first term, the salaries of each being $1,000. There is also appropriated $3,000 more for the support of the school, and such other professors will be appointed as may be necessary."

We are the more pleased to lay this news before our readers, in advance of all contemporaries, because it will prove of especial interest to those gentlemen of the Michigan Preparatory School, who sat up until, to them, an unusually late hour (11½ P.M.) to hear the news.

The sessions of the Board, ordinarily being public, much tribulation was engendered because the gentlemen composing the present Medical Faculty, were not admitted to the meeting which involved this extraordinary, but not unexpected, conclusion. It is a somewhat singular fact that *ten minutes* after the expectant outside guardians of medical interests in Michigan gave up the watch in despair, the Regents quietly withdrew, each man to his own *ranche*, like the Arabs at nightfall, or rather at midnight, "stealing silently away." Our sympathies, ever in the ascendant, are extended to the outside waiters, who, perhaps scarcely virgins, yet had no oil in their lamps, to see when the Regents (*nomina clarissima*), as on a previous notable occasion, accomplished a deed of darkness, and under its inky shadow "changed their base," this time to the chagrin of D—s, as aforetime for his jubilation.

> "*The mills of the gods grind slowly,*
> *But they grind exceeding small.*"

This time small pills! Rats desert a sinking ship; the cockroaches and pismires are not so rational.

One is dead, (*de mortuis nil, etc.*), the "chancellor" is eating *sauer kraut* in a Berlin hostelrie, the other of the trio waits, like a baffled conspirator, "hoist with his own petard," black in the face where nature herself put the unmistakable stamp, and blackened, beyond Ethiopic darkness, by cultivation of all the foul arts which Mephistophiles himself would blush to own.

Hang on to your position, Black Knight, with your visor down, your lance and shield are broken!

Without *equivoque*, or uncertain phrase, the Medical Department of the University of Michigan, owes its present humiliation to its own precedents — its own folly. Scorning the will of the profession, and seeking only the advancement of individuals without merit, save that "raying out the darkness" of backstairs influence and kitchen chicanery, it trusted its fortunes to a trio, who, to put it mildly, have been weighed in the balance and found wanting.

Its large classes have been trumpeted as evidence of merit, whilst notably they have been collected by the ignoblest motives which could sway the student — the mere absence of fees. When once ensnared by this fancied advantage, the unfortunate recipient of University charity soon found that even in this he was deceived. Hence, few sought its honors (?), but went elsewhere to secure the doctorate. Meanwhile, personal jealousies, and the pittance doled out as salary to the individual members of the Faculty, drove from among them those whose services were really valuable. Itinerants and local nonentities took the positions, and, *ex necessitate rei*, influence departed.

The President of the University formally and nobly protested against accepting the bribe offered by the legislature, but the emasculated Medical Faculty squeaked only in childish treble of opposition, when they should have united in one grand chorus of scorn and indignation. Could human feebleness be more vividly illustrated than in that midnight watching by the outer door of the Star Chamber, and then, after this last wanton insult to a noble profession, the rulers of the

University sneaking noiselessly away from the mousing sycophants, who, until somnolence overtook them, watched and waited, like *Scholastikos*, for the river to roll by!

Sleep on, now, immortal imbeciles!

This giant fraud upon the profession will every where be trumpeted as a triumph of Lilliput. It will be published in Gath and *howled* in the streets of Askalon. But we put it on record that no general belief in Homœopathy, either "pure and simple," or, as latterly, *mixed*, had any thing to do with this farcical *denouement*.

The diploma of Doctor of Medicine from the University of Michigan, will hereafter give more trouble in the analysis than the identity of the two Dromios. The absurd device of putting the homœopathic branch in some other town than Ann Arbor, is too shallow for consideration. The diplomas will and must be issued under the broad seal of the University, and the Hempel professorship will prove a *hempen* rope which will hereafter strangle its professional respectability.

We congratulate those honorable professional gentlemen, Professors Armor and Ford, that in good time they left the concern. Will the others be *Green* enough to remain?

Fluid Extracts.

The attention of physicians has been turned of late to the general unreliability, and, sometimes, entire worthlessness of the fluid extracts in common use. This inefficiency may be due to the quality of the drug used, or the dishonesty of the manufacturer, but is, in most cases, more probably, the result of the mode of preparation. The trouble seems to lie with those drugs whose medicinal effect depends on volatile principles, which would be evolved on application of even a low degree of heat.

Here, then, is the difficulty that the use of heat renders the extract valueless, because it deprives it of its only valuable ingredient. To dispense with this dangerous agent is the effort of every manufacturer.

Different makers have adopted different methods, involv-

ing the use, however, of more or less heat, but none have achieved the result desired, till Dr. Samuel P. Duffield, of Detroit, announced his process, in which he avoids the use of any heat whatever. The following is a short description of this valuable improvement:

"The drug is ground to a coarse powder and placed dry in an iron cylinder. The air is then exhausted by means of an air pump, causing the pores of the drug to give up the air contained in them, and permit the entrance of the menstruum, which is forcibly sucked in through a syphon tube. The effect of this is to impregnate the menstruum with the entire soluble and medicinal properties of the drug, and thus rendering after concentration with the aid of heat unnecessary."

Many of our leading physicians, among whom we might mention Professor Weber and Scott, of Cleveland, Professor Armor, formerly of the Michigan University, Professor Hildreth, of Chicago, have tried fluid extracts made according to Dr. Duffield's process, by Duffield, Parke & Co., of Detroit, with a view to thoroughly test the merits, and have pronounced them decidedly superior to others in use.

In general appearance they differ much from the dark colored preparations to which we are accustomed. The standard is that of the U. S. Pharmacopœia, sixteen troy ounces of the drug to the fluid pint.

LOOT.

"Milk for Babes."

Dr. Tracy, of Andover, Mass., writes thus of "Milk for Babes," to the Boston *Journal of Chemistry:*

"Writers generally speak as if all cows' milk was equally good, or nearly so, for babes. I wish to say that, about twelve or thirteen years ago, I was led to notice that cows' milk which retained its color after the cream had been taken off,

would sit well upon the stomach; while that which was either bluish or greenish after the cream was taken off, would uniformly disagree. For the last dozen years, I have not met with a single instance where an infant has failed to be well nourished, and to flourish well, upon such milk as first mentioned; nor have I met with a single instance where one fed upon such as last named, did not suffer from colic, green dejections, and general ill health. The rule is, the less change of color between the new milk and the same milk after standing twelve hours and having the cream removed, the better the milk for infants; and, on the contrary, the greater the change of color, the more unsuitable for their purpose. This is an item that I have never seen noticed by any writer, excepting by the author of '*The Mother and her Offspring.*' No analysis is necessary to indicate to mothers the kind of milk their children require. The color after the removal of the cream, will indicate its positive or relative fitness or unfitness for children's food."

Germain to the same subject, Mr. Horsley, analyst to the county of Gloucester, in a paper on the subject, *Chemical News*, says that a milk may be of high density, and yet give but comparatively little animal matter, such as cream and caseine, whilst the amount of lactine retained in solution in the whey may be greater than usual. On the other hand, a sample of milk may be of lower density, and yet yield far more animal matter than ordinary, though each may be perfectly genuine; the difference in the relative value of the constituents depending much on the time of year, the mode of keeping and feeding the cow, etc. He found only one degree of difference between a sample purchased at Cheltenham and a sample supplied to the workhouse; but an analysis of the two specimens shows not only a vast difference in the amount of solid matter, but also that very little reliance can be placed in any of the instruments usually employed in determining the value of milk; for the fatty matter of the milk, unlike any other aqueous solution, helps to keep up the instrument, and gives no idea of the actual density of the sample, nor of its value.

In the cases of infantile intestinal trouble, where *good* milk fails to agree, much advantage will be gained by adding to it a few grains of the *Phosphate of Soda.* It is vastly better than the old-fashioned plan of giving *Hyd. cu. Cret.* every time the infantile "bowels are out of order." This is an old

remedy for this sort of trouble, and a very good one; and we are happy to see Dr. Stephenson, of Edinburgh, recalling attention to it. He says:

"In infants who are being artificially reared, and who are liable to frequent derangement of the bowels; also, when the phosphatic elements in the food seem deficient, or when articles of food rich in phosphates, such as oat-meal, disagree; where, from the character of the motions, there is a deficient or defective secretion of bile. It is thus of service in cases of chalky stools, or white fluid motions. I have also found it of service in many cases of green-stools. In diarrhœa, generally, it is more difficult to distinguish the class of cases. In simple diarrhœa, such as we frequently meet with in the summer months, I have not found it of much service alone, although it may be of use when given in combination with other remedies. It is chiefly in that class of cases which are more properly termed duodenal dyspepsia, that it is of benefit. Diarrhœa after weaning is generally of this nature, and the cases are often chronic, or of some weeks' standing; the mother generally having exhausted her own and the nearest druggist's resources, before applying for advice. It is also of service in some cases where the diarrhœa is due to some general cachexia."

He also uses it with adults in some cases of constipation, and in cases of duodenal dyspepsia. He likens its action in phthisis to that of the hypophosphites of soda. The dose for children is four to ten grains, in the food; for adults, twenty to forty grains, in water, and taken after meals. Too small doses fail of their action.

Decolorizing Tinct. Iodine.

Some time since, we gave in the JOURNAL a formula for decolorizing *Tinct. Iodine*, by the addition of a few drops of *Carbolic acid*—giving a solution of "*Carbolate of Iodine.*" Dr. Baruch, of S. C., writes to the *Medical Record* that sometimes this may be contra-indicated. In such cases, he observes:

"I have ascertained that the *Hyposulphite of soda* has the peculiar effect of depriving the *Iodine* of its color, forming a perfectly limpid fluid, which does not form the purple *Iodide of starch* on the linen, nor produce a yellow discoloration of

the skin. The *Hyposulphite* having no medicinal effect in the small quantity required for this purpose, the *Tr. iodine* suffers no addition to nor detraction from its therapeutic properties. I make a saturated solution of the *Hyposulphite* in water, and this is added in proportion of about one-sixth of the *Tr. Iodine*. The latter floats upon the former; but, through agitation, will produce a beautifully clear solution with the properties mentioned. The solution of the *Bisulphite* answers the same purpose. If we desire to obtain the effect of the undiluted *Tr. iodine*, we need only dissolve a few small crystals of the *Hyposulphite*, or a little of the powder of the *Bisulphite*, in the tincture, and complete decoloration will be the result.

Among the varied uses to which *Carbolic acid* is being put, Dr. Waring commends its addition to zinc ointment, in badly smelling sores, cancer, etc. Five grains to the ounce of zinc ointment, is recommended as a local application to fœtid feet and armpits.

Treatment of Venereal Diseases in Paris.

Dr. Yandell, writing from Paris to the *Nashville Journal*, says that in the *Hospital du Midi* they insist on puncturing buboes perpendicularly, and not horizontally; the contraction of the skin thus keeping the incision open. All sorts of chancres are treated by frequent applications of *Lunar caustic*, and dressings of aromatic wine or aromatic vinegar. In Paris, as in London, "a bewildering contrariety of opinion" exists as to the varieties or identities of syphilis; and many even contend that syphilis sometimes results from a blenorrhœa. Circumcision is resorted to, whenever any excuse is afforded — prominently as "security for the future," after a very French fashion.

Cubebs and *Copaiba* maintain their pristine ascendancy in the treatment of blenorrhagia, to such an extent that many patients prefer to submit to the disease rather than suffer the nauseous remedy. It is scarcely probable that in the treatment of venereal diseases, "they do these things better in France" than in this country. In fact, no man can transplant the details of French therapeutics to this country, and succeed in practice. The best part of their therapeutics is their cookery,

which Dr. Y. strongly commends; incidentally observing, "Bad cooking, I am convinced, killed more Confederate soldiers than were killed by the Yankees." The millenium can not come, of course, until sin ceases in the world; but sin can never disappear, while the brains and nerves of men are tortured by unwholesome blood, the result of bad cooking; and so I conclude that the man who improves the cookery of his country, is one of its true benefactors — certainly the peer of him who makes 'two blades of grass to grow where one grew before.'" All of which, we steadfastly believe.

Preserving Anatomical Specimens.

The *Journal de Pharmacie et de Chirurgie* records the process of M. Van Vetter, of the Anatomical Museum of the University of Boulogne, in preserving anatomical specimens:

He takes seven parts of glycerine, one part of brown sugar, and half a part of *Nitre*, and mixes them. The pieces to be preserved are placed in this, and allowed to remain until hard as wood. The time depends upon their size — a hand requiring eight days. They are then suspended in a dry, warm apartment. The glycerine soon evaporates, leaving the specimens soft and supple, and with their natural color. The action and mechanism of the muscles may be demonstrated from specimens thus prepared.

Cannabis Indica

Is again spoken of in the treatment of delirium tremens.

AMERICAN MEDICAL ASSOCIATION.

Office of Permanent Secretary, Wm. B. Atkinson, M.D., *S.W. Cor. Broad and Pine Sts., Philadelphia.*

The Nineteenth Annual Meeting of the American Medical Association will be held in Washington, on Tuesday, May 5th, 1868, at 11 o'clock A.M.

The following committees are expected to report:

On Ophthalmology, Dr. J. S. Hildreth, Illinois, Chairman.

On Cultivation of the Cinchona Tree, Dr. J. M. Toner, D. C., Chairman.

On Surgical Diseases of Women, Dr. Theophilus Parvin, Ind., Chairman.

On Rank of Medical Men in the Navy, Dr. N. S. Davis, Ill., Chairman.

On Insanity, Dr. C. A. Lee, N. Y., Chairman.

On American Medical Necrology, Dr. C. C. Cox, Md., Chairman.

On Leakage of Gas Pipes, Dr. J. C. Draper, N. Y., Chairman.

On Medical Ethics, ——— ———, Chairman.

On Plan of Organization, Dr. C. C. Cox, Md., Chairman.

On Provision for the Insane, Dr. C. A. Lee, N. Y., Chairman.

On the Climatology and Epidemics of Maine, Dr. J. C. Weston; of New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. Alfred C. Garrett; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engelman; Alabama, Dr. R. Miller; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamill; Indiana, Dr. J. F. Hibbard; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. W. H. Baker; Michigan, Dr. Abm. Sager; Ohio, Dr. J. W. Russell; California, Dr. F. W. Hatch; Tennessee, Dr. Joseph Jones; West Virginia; Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey.

On Clinical Thermometry in Diphtheria, Dr. Jos. G. Richardson, N. Y., Chairman.

On the Treatment of Disease by Atomized Substances, Dr. A. G. Field, Iowa, Chairman.

On the Ligation of Arteries, Dr. Benj. Howard, N. Y., Chairman.

On the Treatment of Club-Foot without Tenotomy, Dr. L. A. Sayre, N. Y., Chairman.

On the Radical Cure of Hernia, Dr. G. C. Blackman, Ohio, Chairman.

On Operations for Hare-Lip, Dr. Hammer, Mo., Chairman.

On Errors and Diagnosis in Abdominal Tumors, Dr. G. C. E. Weber, Ohio, Chairman.

On Prize Essays, Dr. Chas. Woodward, Ohio, Chairman.

On Medical Education, Dr. A. B. Palmer, Mich., Chairman.

On Medical Literature, Dr. G. Mendenhall, Ohio, Chairman. Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary. W. B. ATKINSON.

Receipts since Jan. 1.

The following is a list of persons from whom money has been received at this office for the JOURNAL, together with the amount paid by each, since the beginning of the current year:

Annis, T E, $2; Armstrong, J M, 6; Albin, G W, 3; Armstrong, J S, 2; Arter, J R, 2; Allen, C C, 3; Amos, E, 3; Armstrong, L G, 3; Armstrong, W G, 10; Adams, H D, 3; Andrews, L M, 4.50; Allen, C I, 3; Adams, O B, 3; Anthony, J P, 3.

Barr, J A, 2; Broughton, R, 2.25; Barnwell, J H, 5; Bosco, O H, 2; Bradbury, W T, 5; Boole, T N, 3; Blood, S, 2; Berchelman, A, 3; Barkett, B, 2; Burner, S A, 6; Bingham, R H, 3; Bates, J H, 2; Bacon, A J, 3; Boening, L, 3; Booth, 3; Brigham, J W, 3; Brookhart, L, 5; Baker, J H, 2; Bailey, W W, 2; Barnett, J R, 2; Baldwin, M O, 4.50; Brown, L, 2; Bennett, J, 3; Boardman, J G, 3.50; Blanchard, J G, 3; Brown, J Z, 4.50; Boardman, E R, 3; Bradshaw, B H, 6; Barnes, R A, 3; Baker, B, 3; Bayles, E W, 3; Bailey, F K, 3; Brown, J, 5.

Corkins, P G, 6; Cozad, J, 3; Coover, W H, 3; Covert, G W, 2; Cory, J B, 3; Cusack, J H, 5; Clark, S, 3; Cowden, J W, 2; Chase, H A, 2; Crosswait, P R, 3; Cook, J A, 2; Crane, W H, .75; Clark, W W, 3; Cole, F, 3; Campbell, J W, 2; Clark, J A, 3; Chesbrough, H F, 3; Comstock, T G, 3; Cargen, W, 3; Cook, E P, 3; Clark, H N, 3; Carlisle, C H, 2.20; Cloud, J B, 3; Cole & Crosswait, 3; Condon & McClelland, .75; Clark, Ossian, 6.

Drake, J T, 4; Dunn, J W, 3; Dietrich, T A, 3; Durr, J A, 10; Davidson, D L, 2; Davis, B F, 3; Dora, J W, 3; Dunn, A A, 3; Drummond & Bower, 1; Douglas, A C, 3; Drake, N A, 2; Dyer, L, 3; Danforth, I N, 3; Dant, J R, 5.

Elhardt, F, 2; Elder, T A, 2; Egbert, J B, 6; Ellis, D E, 3.

Fawcett, H B, 4; Felker, J B, 6; Flynn, W, 2; Fisk, G, 2; Fenton, S C, 3; Foster, J H, 3; Fenn, C T, 3; Fish, S N, 3; Fifield, F, 2; Flood, J R, 3; Ford, C L, 3.

Gibbs, J A M, 2; Gill, C J, 3; Gibson, A C, 2; Galloway, S, 3; Gray, J D, 6; Grattan, E H, 3; Griffith, J H, 3; Goldsbury, J A, 3; Gandy, J L, 3; Goodell, J H, 1.50; Glassner, E T, 6; Garven, 5; Gray, S C, 7; Galer, J B, 5; Green, J S, 3.

Heavenridge, A, 3; Hughes, M, 2; Horton, H E, 3; Hall, R W, 3; Hoffman, J E, 2; Hollingsworth, 5; Hain, W F, 2; Haskell, A S, 3; Hagey, W H, 2; Herdman, J W, 3; Holland, A, 1.25; Hutchins, J H, 2; Hodge, A, 1; Hutchings, 4; Hagelisen, 3; Hobbins, J H, 6; Hulburt, V L, 3; Haggard, J R, 2; Hart, H W, 3; Hayes, J, 3; Hait, C E, 3; Hopkins, R, 3; Herman, P J, 3; Hunt, T, 6; Hoss, J V, 3; Hunt, J, 3; Henry, A F, 3; Haladay, A, 3.

Irwin, E H, 3; Ireland, A B, 3.

James, O, 2; Johnston, Thomas, 3; Jones, J R, 3; Johnson, C J, 5.50.

Kelsey, W J, 3; Kirkpatrick, G W, 5; Kimball, 3; Kelper, G F, 3; Kinnear, A H, 3; Knowles, J, 3; Kennicott, 3; Knox, W A, 3; Keigan, C J, 2; Kennedy & Moor, 10; Kyner, D J, 6.

Lyman, M J, 3; Love, H, 6; Lueck, A W, 3; Latta, M M, 6; Lewis, J B W, 3; Little, J, 1; Lemingwell, J W, 3; Leavitt, J J, 2; Layne, P M, 4; Long, S O, 3; Leonard, W R, 2; Low, J, 3; Law, W, 6.

Mowrer, P A, 4.50; Morrow, G M, 2; May, W L, 5; McCleary, 5; Mead, A J, 3; Maloney, J M, 2; Mahon, 7; Miller, J W, 6, Mansen, W, 2; Middleditch, A, 3; Messner, L C, 2; Murphy, S C, 3; Montgomery, D B, 2; Marshall, E B, 2; McKune, A B, 2; Marshall, W R, 3; Miller, A, 2; Moffitt, J, 2; McCulloch, A P, 2; McCaughey, T C, 2; Mayo, E L, 2; Moore, E L, 3; McClure, A W, 3; Meek, J A, 6; Miller, A J, 3; Morse, W A, 3; Monroe, H, 3; Mergler, 3; McFarland, P M, 1; McKnight, W, 3; Molony, R S, 6; Martin, F E, 2; Moore, A V, 2; Mallett, 6.50; May, J K, 6; Montgomery, D B, 1; Murphy, Thomas, 2.

Newkirk, G, 2; Nelson, A P, 6.

O'Brien, J H, 5.

Patton, W R, 2; Parks, T H, 3; Pankhurst, 2; Pierce, R W, 5; Peters, J H, 2; Plummer, S C, 6; Pratt, A S, 6; Patton, W K, 3; Porter, W B, 3; Price, W H, 3; Perry, J W, 3; Prentice, J, 3.

Ray, R B, 6; Ross, B F, 6; Rea, D, 3; Riddler, J G, 5; Reed, C B, 2.50; Rankin, J M, 1.50; Redmon, L, 3; Rush, B H, 3; Reed, R, 2; Robinson, J. H. 10; Riddle, H R, 2; Rusell, E F, 3; Robinson, S E, 3; Rodman, A J, 6; Rich, K E, 3.

Sweetland, W M, 3; Salisbury, S S, 3.50; Sigworth, H W, 3; Somers, W, 3; Smith, A E, 3; Sims, J, 5; Sprague, C C, 3; Smith, C H, 3; Stevens, D R, 3; Smith, W H H, 2; Simpson, J, 2; Searles, J, 1; Skeer, J D, 3; Snyder, J D, 3; Spitler, E, 2; Seely, O F, 2; Saucerman, J M, 3; Silverthorn, L L, 5; Sherman, N, 3; Sullivan, W H, 5; Smith, H W, 1; Smith, M F, 3.

Trueworthy, J W, 2; Tuttle, J V, 3; Thayer, J W, 3; True, B F, 3; Trabue, J W, 3; Tebo, G H, 3; Taylor, G O, 2; Thompson, D D, 2; Tucker, B B, 3; Thurman, J B, 3; Towne & Brett, 3; Tucker, J B, 3.

Vosburg, D M, .75; Van Nus, J S M C, 3; Van Meter, H, 3.

Williams, J D, 2; Whittlesey, S H, 2; Waterhouse, M, 5; Webstee, J R, 3; Worsley, G, 3; Walsten, R L, 3; Wheaton, 2; Winson, J, 3.25; Warner, H, 3; Witherspoon, M V B, 1.25; Williams, J A, 3; Webster, J C, 2; Woodworth, L C, 3; Wetmore, R B, 3; Wood, T F, 1.50; Webster, B M, 2; Wheeler, E N, 2; Wilson, W T, 3; Woodman, E, 2.

Yount, T J, 2.